

PN5-3

Trauma Surgery in Germany*L. Kinzl; F. Gebhard*

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Depending on his experience and skills, the trauma surgeon in Germany is destined to coordinate trauma management and therapy as the responsible leader of the trauma team. This does not imply that he is the new surgical all-rounder, who takes the place of all of the surgical specialties.

Rather, the trauma surgeon must have the skill to lead the trauma team in close cooperation with the anaesthetists. S/He must decide in due course and should define priorities and the sequence of the treatment. The trauma team leader must prevent unsuitable treatment of the multiply injured victim, and forestall the likelihood that "new specialists" divide the patient into several anatomical parts according to their individual sub-specialization.

S/He is the representative for an organization that stands for precise and quick diagnostic procedures leading to an optimum of therapy. His/her virtue is not the ultimate specialization in a small specialty, but practicality and common sense in decision-making and conduct. Trauma surgery is more than the arithmetic sum of therapeutic strategies, which are used in a single injury. Only when the surgeon has gained insight into the pathophysiology of trauma, and agrees to additional help and advice from other specialties, then the treatment of casualties will be optimized.

Keywords: anaesthetists; coordination; leadership; multiple injuries; pathophysiology; skills; surgery; trauma; trauma surgery; treatment; sequence of

PN5-5

Trauma Surgeons in Japan*Kunio Kobayashi, MD*

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Trauma is a major social issue in every developed country, and it is the principal cause of death in children and young adults. It is estimated that there are approximately 1,100,000 injured people annually, about 60% of which are due to traffic accidents. Among those injured, one-third are moderately injured requiring hospital admissions, and about 8% are severely injured who need special care at trauma centers.

It may be fair to say that traumatology is a neglected part of surgery in Japan. Traditionally, the major part of surgery has been surgical oncology of abdominal organs. Traumatology in Japan evolved as a part of Emergency Medicine. As tertiary emergency centers are founded in private, university hospitals, many surgeons have become responsible for the care of tertiary emergency patients, among which severely injured patients are a main target. Thus, trauma surgeons in Japan do not belong to the

Surgery Department, but to the Department of Emergency Medicine. It is common for trauma surgeons to take care not only trauma cases, but also other emergencies such as patients with major burns, of hanging, drowning, acute poisoning, and others.

Post-traumatic and surgical intensive care is an important field of responsibilities for trauma surgeons.

Training of trauma surgeons is a matter of great concern in Japan. Many of the surgeons have a good standard of surgical skills before they come into traumatology. However, as each emergency center has only a few hundred major trauma cases per year, and more and more patients with major trauma are treated non-operatively, the number of cases is insufficient for proper training of young trauma surgeons.

Trauma care in Japan as well as those problems related to trauma surgeons will be discussed.

Keywords: Emergency Medicine; Japan; prevalence; surgeons; training; trauma; trauma surgeons; traumatology

Wednesday, 12 May, 13:00–14:40 hours

Symposium II

Educational Models of Disaster Medicine

Chair: Morgan Fabrey, Masamitsu Kaneko

S2-1: Medical Disaster Response: An Educational Model for the Management of Earthquake Victims

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The management of injuries and illnesses after a massive earthquake differs significantly from the treatment of these same conditions under normal circumstances. Hospitals are damaged, supplies are limited, large numbers of patients require medical care, outside assistance will not arrive for 2–3 days, and most preventable deaths occur within the first 24 hours. Medical providers lack the training to deliver appropriate care under these conditions. The Medical Disaster Response (MDR) Project was created as a model to address this deficiency. The MDR model has two components: 1) an operations plan; and 2) a training course. The operations plan directs the initial management of personnel and casualties. Medical care is provided at surviving hospitals or at disaster medical aid centers (DMACs), and casualty collection points (CCPs) containing medical supplies. The training course provides health-care workers with information about the unique medical problems of earthquake victims. The MDR curriculum is taught in a two-day course using lectures, a tabletop exercise, and laboratory workshops. The lecture portion of the course covers mass-casualty triage using the START (Simple Triage And Rapid Treatment) and SAVE (Secondary Assessment of Victim Endpoint) techniques, field anesthesia and analgesia including the use of ketamine, airway interventions, use of intravenous fluids, management of crush injuries including amputations and

fasciotomies, and integration into the incident command system. Two levels of instruction are provided; one for physicians and one for nurses. Triage techniques also are taught using a tabletop exercise and a real-time computer simulation of triage under disaster conditions. In the animal laboratory workshop, students practice endotracheal intubation, cricothyrotomy, chest tube thoracostomy, and central and intraosseous line placement. In the crush injury laboratory session, students practice amputations, fasciotomies, and muscle compartment pressure monitoring on fresh frozen human cadaver arms and legs. The MDR model has been successfully implemented in two sites in the United States, both in California.

Keywords: course, training; education; exercises, tabletop; hospitals; laboratory; medical responses; model; physicians; nurses; response; simulations; training; triage;

S2-2

Training on Disaster Medicine in the Philippines and the Western Pacific Region

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Being one of the most disaster-prone areas of the world, the Philippines needs to have adequate preparedness measures for different kinds of emergencies. The various efforts conducted to help improve disaster management in the country are presented in the paper. Agencies that are involved range from academic institutions, line agencies of the government, non-governmental organizations, and even community based organizations.

In the Western Pacific Region, the World Health Organization has been assisting member countries in strengthening national capacities for disaster preparedness. Plans for future training activities also are presented. There is a need for the development of more training programs in the health aspects of disasters, and there should be greater collaboration between disaster management/relief organizations and the training institutions.

Keywords: agencies; capacities; collaboration; disaster management; Disaster Medicine; organizations; preparedness; training; World Health Organization (WHO)

S2-3

Education for Major Accidents and Disasters in Sweden

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The predominant disaster risks in Sweden are accident risks (transport accidents, chemical and biological accidents, radiation accidents, fires, explosions). The risk of

natural disasters (e.g., earthquakes, typhoons, floods, drought) with large numbers of dead and injured is small in Sweden. Terrorism and war can lead to serious mass injury situations. At the same time, problems with the supply of drugs and material may arise.

In Sweden, 21 politically largely independent regions (County Councils, etc.) have the responsibility for providing and financing medical care. On behalf of the Government, the National Board of Health and Welfare — a central autonomous authority under the Government — has the primary task to evaluate the outcome and supervise the quality and safety within Medical Care, Social Welfare, and Public Health.

The National Board also bears the overall responsibility within its field of responsibility, for planning and supply for war and national emergencies. This includes the education and training of medical personnel to ensure adequate preparedness for medical care both in peacetime disasters and wartime. Part of the funding needed for such education and planning is transferred from the defence budget.

The objectives of education in Disaster Medicine are to provide basic knowledge of management of medical care in a disaster. It also helps to increase the interest for medical preparedness. The aim of the education is to train/provide: 1) Work under special environmental circumstances; 2) Treatment of conditions that are unusual to most doctors and nurses, such as severe trauma cases, injuries caused by nuclear, biological, or chemical agents etc.; and 3) Information to non-medical personnel (“key” personnel in hospital management, etc., technicians)

The courses are given as follows:

- 1) National courses, organised by the National Board of Health and Welfare, (approximately 500 educated per year, 4–5 days/course funded with equivalent of \$875,000 USD/year from Defence budget):
 - Management in hospitals and on the accident site;
 - Methods for work in a rescue staff;
 - Casualty care in case of nuclear and chemical accidents as well as hypothermia;
 - Public health and investigation techniques – infectious diseases;
 - Surgery in disaster conditions;
 - Trauma specialist teams;
 - Debriefing teams;
 - Financial support to County Councils.
- 2) Courses provided by the County Councils (approximately 10,000 educated per year, 1–2 days/course, funded with equivalent of \$3,250,000 USD/year from Defence budget) include locally adapted courses and exercises such as:
 - management at accident site;
 - decontamination;
 - Information to politicians.

Keywords: curricula; Disaster Medicine; disasters; education; financing; preparedness, medical; quality; risks; safety; training courses